WE CLAIM:

1. A supported walking system comprising:

a walking figure having a body and at least two limbs attached to the body;

a wheeled portion comprising one or more wheels, said wheeled portion at least partially supporting the walking figure; and

a control system, wherein the control system determines a first movement of the one or more wheels, a second movement of the first limb, and a third movement of second limb, wherein the control system sends a first instruction of the first movement to a first set of circuitry attached to the wheel, wherein the controller sends a second instruction of a second movement to a second set of circuitry attached to the first limb, wherein the controller sends a third instruction of a third movement to a third set of circuitry attached to the second limb.

2. The supported walking system of claim 1 wherein the control system is housed within the wheeled portion.

3. The supported walking system of claim 1 wherein the control system further comprises an input device.

4. The supported walking system of claim 3 wherein the input device is a joystick.

5. The animatronic walking system of claim 1 wherein the first movement of the one or more wheels effectuates a change in position of the supported walking system.

6. The animatronic walking system of claim 1 wherein the first movement of the one or more wheels causes the supported walking system to move.

7. The animatronic walking system of claim 3 wherein the controller receives a command from an input device and simultaneously determines the first, second, and third movements.

8. The animatronic walking system of claim 3 wherein the controller receives a command from an input device to determines the first command movement of the wheel, and later determines second, and third movements.

9. The supported walking system of claim 1 wherein at least one wheel is a drive wheel.

10. The supported walking system of claim 1 wherein at least one wheel is steerable.

11. The supported walking system of claim 1 wherein at least one wheel is powered.

12. The supported walking system of claim 1 wherein the walking figure and the wheel module are connected by a yoke, said yoke having hinges allowing movement of the limbs relative to the wheel module.

13. The supported walking system of claim 1 wherein the first movement of the first limb, the second movement of the second limb, and the third movement of the wheel are coordinated.

14. The supported walking system of claim 1 wherein the walking figure is a dinosaur and the wheeled portion is a cart.

15. The supported walking system of claim 10 wherein an operator drives the cart, which in turn causes the walking figure's legs to move.

16. An animatronic walking figure comprising:

a body;

a first limb and a second limb operably attached to the body;

at least one wheel, the wheel at least partially supporting the walking figure; and

a controller, wherein the controller determines a first movement of the at least one wheels, a second movement of the first limb, and a third movement of second

limb, wherein the control system sends a first instruction of the first movement to a first set of circuitry attached to the wheel, wherein the controller sends a second instruction of a second movement to a second set of circuitry attached to the first limb, wherein the controller sends a third instruction of a third movement to a third set of circuitry attached to the second limb.

17. The animatronic walking figure of claim 16 wherein the first movement of the one or more wheels effectuates a change in position of the supported walking system.

18. The animatronic walking figure of claim 16 wherein the first movement of the one or more wheels causes the supported walking system to move.

19. The animatronic walking figure of claim 16 further comprising an input device.

20. The animatronic walking figure of claim 19 wherein the input device is a joystick.

21. The animatronic walking figure of claim 19 wherein the controller receives a command from an input device and simultaneously determines the first, second, and third movements.

22. The animatronic walking figure of claim 19 wherein the controller receives a command from an input device to determines the first command movement of the wheel, and later determines second, and third movements.

23. The animatronic walking figure of claim 16 wherein the at least one wheel is a drive wheel.

24. The animatronic walking figure of claim 16 wherein the at least one wheel is steerable.

25. The animatronic walking figure of claim 16 wherein the at least one wheel is powered.

26. The animatronic walking figure of claim 16 wherein the movements of the first and second limb and the wheel module are coordinated.

27. The animatronic walking figure of claim 16 wherein the walking figure is a dinosaur.

28. The animatronic walking figure of claim 16 wherein an operator drives the at least one wheel, which in turn causes the walking figure's legs to move.

29. A method of controlling the walking movement of a two legged walking figure comprising:

determining a reference line;

receiving a command from an input device, the command representing a velocity to move the walking figure;

translating the velocity into a distance to move;

moving a first leg a specified distance with respect to the reference line; and

moving the second leg once the first leg is planted on the ground.

30. The method of claim 29 wherein the joystick directly controls the velocity of the wheels.

31. The method of claim 29 wherein the velocity of the wheels is controlled by the distance the joystick is moved from its center position.

32. The method of claim 29 wherein a movement of the joystick to the forward or reverse controls the wheels to move forward or reverse.

33. The method of claim 29 wherein a movement of the joystick to the left or right controls rotation of the two wheels.

34. The method of claim 29 wherein when the joystick is moved to the left, directly controls the left cart wheel rotates backwards, and the right wheel rotates forwards.

35. The method of claim 29 wherein movement of the joystick to the left results in a counter-clockwise rotation of the two wheels

36. The method of claim 29 wherein movement of the joystick to the right results in a clockwise rotation of the two wheels.

37. The method of claim 29 wherein when the joystick is moved at an angle, motions are combined linearly so that the cart moves forward or backward and in a rotational.

38. The method of claim 29 wherein the leg comprises a sensor for determining the force when contacting the ground.

39. A skeletal support system for an animatronic figure comprising:

a plurality of rings, each ring shaped according to a cross section of the figure and a plurality of flexible connectors, the plurality of rings connected to each other with at least one flexible connector in between, such that the overall structure is free to move and bend, but provides a structure for skin or other covering.

40. The skeletal support system of claim 39 wherein a skin is stretched over the skeletal support system.

41. The skeletal support system of claim 40 wherein the skin is made of foam latex.

42. The skeletal support system of claim 39 wherein the rings are made of aluminum.

43. The skeletal support system of claim 39 wherein the rings are made of cardboard honeycomb.

44. The skeletal support system of claim 39 wherein the flexible connector is made of rubber.

45. A method of providing a flexible and realistic skeletal support structure for a mechanical figure comprising:

creating a model of the figure;

scanning the model of the figure;

dividing the figure into a plurality of cross sections;

casting rings for selected cross sections; and

attaching the rings to each other using a flexible connector to create a skeletal support structure.

46. The method of claim 45 wherein a skin is stretched over the skeletal support system.

47. The method of claim 46 wherein the skin is made of foam latex.

48. The method of claim 45 wherein the rings are made of aluminum.

49. The method of claim 45 wherein the rings are made of cardboard honeycomb.

50. The method of claim 45 wherein the flexible connector is made of rubber.

51. A compact robotic joint having two rotational degrees of freedom, comprising:

a first link rotatably mounted to and moving relative to a second link along a first axis; and

a third link rotatably mounted the second link and moving relative to the second link along a second axis,

the first link and third link each comprising an electric motor and a gearbox.